

## WIND-POWERED ELEVATOR



Design and build a device that lifts objects using the power of wind!

### WHAT DO YOU NEED?

- Small, lightweight object (to use as a load to lift)
- **Tools:** tape, scissors pencil and paper
- **Materials:** Recycled paper and/or sticky notes, string, drinking straws, craft sticks, recycled cardboard, fine yarn or thread, pipe cleaners, etc.



### WHAT DO YOU DO?

1. Draw a design on paper of a wind-powered elevator that can lift a small load. Label the parts of your design.
2. Build your wind-powered elevator. Keep in mind that the elevator should be totally wind-powered. The load is lifted only by blowing on the structure.
3. Test it out!
4. Make modifications until you get it to work.

#### Did you know?

A wind turbine is a device that converts the movement of the wind (kinetic energy) into electrical energy.



Will I add paddles or a pinwheel to catch the wind?

Is it able to lift the load? What changes does it need?

Does the wind-powered elevator turn easily by blowing on it?

### WHAT'S THE POINT?

You have just used a renewable source of energy to power your elevator - moving air! Energy from the wind, the Sun, and moving water are all forms of renewable energy.

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Perhaps you have seen wind turbines starting to dot the countryside or shoreline in your region? Wind energy along with other renewable energy sources are helping to meet the growing energy demands in our world. They also reduce the need to burn coal and other fossil fuels for energy. Wind turbines will generate electricity as long as the wind is blowing. They do not produce greenhouse gases while they are operating. This is good for the Earth!



Wind turbines on a hillside (Source: iStockphoto).

### WHAT ELSE?

Check out these cool careers that involve renewable energy

- [Brian Camenzuli: VP of Design & Engineering](#) (Career Profile)
- [Terence Brouwer: Manufacturing Operations Manager](#) (Career Video)

Learn more about renewable energy in these articles:

- [How do Wind Farms Affect Birds and Bats?](#)  
Wind energy generates a lot of electricity in Canada. But wind turbines can be dangerous for wildlife.
- [How it Works: Hydroelectric Power](#)  
Learn how moving water can be used to generate electricity. This is called hydroelectric power generation.

### Try this:

- Modify your elevator design to lift a heavier object or more than one object at a time.
- Here is a simple way to make a pinwheel to catch the wind:

